IDEM

INDIANA DEPT. OF ENVIRONMENTAL MGMT.

the Notepad

Issue 6, Summer 2003

E-Newsletter for schools

In this issue...

About the Notepad:

The Notepad is an IDEM quarterly electronic publication designed to inform Indiana educators and school administrators about possible environmental health threats in their buildings and to keep them abreast of environmental education resources.

IN Dept. of Environmental Management
100 N Senate Ave.
P.O. Box 6015
Indianapolis, IN 46206-6015
Tel: (800)-451-6027
Fax: (317)-233-6647
http://www.in.gov/idem/schoolnews

Indiana Wetlands

By Cheryl Reed, IDEM Assistant Commissioner of Public Policy and Planning

With the dog days of summer and a new school year fast approaching, there's no better time for educators' thoughts to turn to outdoor classroom activities.

As an academic subject, wetlands cover the gamut from current events to history; from biology to music and culture - all of it permeated with frogs, birds, bats, dragonflies and literally thousands of other critters and plants. Academic opportunities during good weather are bountiful, but wetlands can be used as a teaching tool throughout the school year, too.

So what are wetlands, anyway? Like their name implies, they're wet areas where water covers the soil, or is present either at or near the surface of the soil for part or all of the year, including the growing season for plants. You may recognize them as swamps or bogs. Some wetlands are very large and offer homes and resting places to huge flocks of birds and other wildlife. Others are very small and can be dry some parts of the year, offering seasonal but essential services during wet weather. More than 60 of Indiana's endangered plants and animals live in or rely on a wetland to survive - that's more than 1/3 of our total endangered population.

In addition to providing a home for animals and plants, wetlands do the heavy lifting when it comes to filtering water that we eventually drink, providing flood control, and keeping our rivers, lakes and streams clean.

The good news is that if you look a little bit, you can probably find a wetland near your school. The bad news is that Indiana wetlands are rapidly disappearing. About 25 percent of Indiana once was covered by wetlands; today less than 4 percent of the land includes one of these important areas. Many groups are working hard to protect what's left, and your students can help that effort.

How?

- By learning about wetlands
- By adopting a wetland of their own
- By building or restoring a wetland

Along the way, your students will have the opportunity to:

- Learn new and advanced vocabulary words
- Learn more about Indiana's flora and fauna by meeting them face-to-face
- Develop an interest in science
- Learn about government by following the work of the Governor's Task Force on Wetlands
- Learn about the legislative process by following the 2004 General Assembly where wetlands legislation will likely be discussed.
- Become stewards of the land.

Visit http://www.in.gov/wetlands and click on "Kids" to learn more about how you can incorporate wetlands into your lesson plans this year. The materials on this site conform to state science standards and have been reviewed by staff at the Indiana Department of Environmental Management and the Department of Natural Resources.

BUG OF THE MONTH

Butterflies

Written by Mark Amick, IDEM Director of Publications

Monarch Butterfly

Does your outdoor lab look lifeless and drab? Do you need a few more vibrant and jewel-like colors in the plantings? What if those colors could move around from plant to plant; be used to predict weather; ensure continuous generations of plants, and act as environmental barometers for your local ecosystem? What are these amazing items and where can you buy them for only $19.95? These little creations are butterflies, and they are definitely worth more than $19.95!

Butterflies are one of nature's most interesting inventions. They come in a rainbow of colors and sizes. They can be found in thousands of environments and are one of the best indicators of an area's ecological health. Much like the proverbial "canary in a coal mine," these intrepid little insects are one of nature's early warning signals. Butterflies are extremely sensitive to environmental stress. Chemical exposure, small environmental changes, and even habit loss can all lead to the loss of populations or even an entire species of butterflies. But there is hope, and it can come from you and your students!

Fun Fact: Did you know that butterflies prefer certain colors? Why? Scientists believe that butterflies see colors in an area of the light spectrum that is invisible to humans. Butterflies seem to stop first at flowers in the purple, lavender, and pink end of the color range.

Schools across the United States are using their outdoor labs as small sanctuaries to help local and migratory butterflies. By establishing butterfly plantings, making supplemental food sources available and providing access to safe areas for foraging and reproduction, you can turn your own outdoor lab into a butterfly haven. Here are five things you can do in your outdoor lab to attract butterflies:

1 ***Create planting beds that feature plants high in nectar and attract butterflies.*** Begin planning for your butterflies by selecting a site in your outdoor lab that receives direct sunlight and has some wind protection. Next, decide what kinds of butterflies you want to attract. Butterflies are naturally attracted to bright flowers, but did you know that some like certain flowers best? Choose plants of many different colors that have flowers packed tightly together in a composite head. Butterflies have a long tongue (proboscis) for sipping nectar from deep flowers. Be sure to group large numbers of flowers together in mass plantings.

2 ***Create places for butterflies to get safe access to water, nutrients and sunlight.***
A source of clean water is essential to a healthy butterfly environment. One of the easiest ways to help is by creating a shallow mud puddle just for butterflies. The puddle can serve as a resting spot to drink and obtain minerals from the soil. If you can't make a puddle, use a container full of moist sand. Think about adding dark rocks, pebbles or stone around your puddle or container. This gives the endothermic (cold-blooded) butterflies a place to sun themselves and warm up on cool mornings.

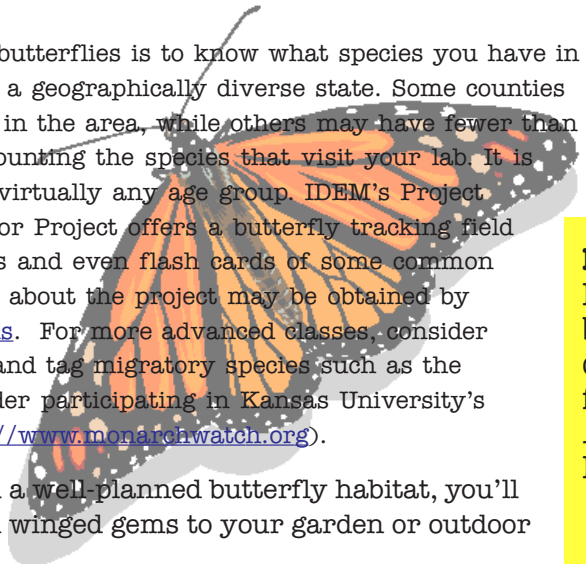
3 ***Provide additional food for both young larva and during fall migrations.***
Adult butterflies, depending on the species, can live from two weeks to several months. Some, like the famous Monarch, migrate hundreds of miles. During their life cycle, butterflies lay eggs, pupate and become the next generation of adults. For some species, multiple generations are born during the summer months or during a long migration route. You can help butterflies complete this life cycle by providing the right food at the right time.

Some caterpillars (the larval stage of butterflies) feed on different plants than the adult butterfly. These "nursery plants," called host plants, can be weeds, trees, shrubs and plants. An example of this is the Monarch butterfly. Larval forms of the monarch feed on milkweed. By feeding on this plant, adult Monarchs develop a natural defense mechanism, a bitter taste that birds learn to avoid. Including host plants in your lab provide a place for adults to lay eggs and ensure a food source for future butterfly generations.

Another important feeding time is fall. During migrations, butterflies are looking for sources of nectar. In our increasingly urban environment, finding sources of nectar in the autumn can be difficult. You can help by providing a makeshift feeder made with a small tray of cut apple, plum, peach, or other overripe fruit. Your tray can be as simple as a flat board or even a shallow flowerpot.

4 ***Make "butterfly-safe zones."***
Butterflies are fragile creatures that benefit from protection from wind, predators and even humans. It is easy to provide this protection by creating a few "butterfly-safe zones" in your outdoor lab or garden. First, protect them from the wind. Create planting beds in front of windbreaks and create places for butterflies to hide or get out of the wind. Second, plant a few evergreen and deciduous trees and shrubs for protection from predators. Finally, make sure that everyone knows your lab is a "butterfly-safe zone." Place signs around the perimeter of the lab or garden to remind others not to spray herbicides and pesticides that could kill both adults and larva.

5 ***Keep track of your visitors.***
One of the best ways to protect butterflies is to know what species you have in your local ecosystem. Indiana is a geographically diverse state. Some counties may have more than 70 species in the area, while others may have fewer than 10. Get your class involved in counting the species that visit your lab. It is easy, fun and can be done with virtually any age group. IDEM's Project LEAP Butterfly Tracking Indicator Project offers a butterfly tracking field log, information about butterflies and even flash cards of some common Indiana butterflies. Information about the project may be obtained by emailing frogtalk@dem.state.in.us. For more advanced classes, consider teaching students how to track and tag migratory species such as the Monarch. You might even consider participating in Kansas University's Monarch Watch Program (http://www.monarchwatch.org).



With a little luck, some patience and a well-planned butterfly habitat, you'll attract a variety of these wonderful winged gems to your garden or outdoor lab.

Nectar Plants

Allium, Alyssum, Aster, Butterfly Weed, Buddleia, Candytuft, Carrot, Catnip, Cat Mint, Chives, Cone Flower, Coreopsis, Dame's Rocket, Daylilies, False Indigo, Fleabane, Four O'clocks, Golden Rod, Heliotrope, Joe Pye Weed, Lantana, Lavendar, Lilac, Marigolds, Milkweed, Monarda, Nasturtium, Petunia, Phlox, Primrose, Salvia, Scabiosa, Sedum, Shasta Daisy, Snapdragons, Spice Bush, Stock, Sunflowers, Thistle, Verbena, Wisteria, Zinnia

Host Plants

Broccoli, Carrot, Clover, Hollyhock, Indian Paintbrush, Lupines, Milkweed, Nettle, Pearly Everlasting, Parsley, Queen Anne's Lace, Turtle Head, Violets

More Information:
Detailed information about butterfly species and their distribution in Indiana can be found in *"The Butterflies of Indiana"*, by Ernest M. Shull, Indiana University Press.

BURNING QUESTION

West Nile Virus:
How can I reduce my staff and students' chances of becoming ill from mosquito bites?

By Tami Johnson

Adapted from Centers for Disease Control and Prevention and the Indiana State Department of Health information

Summer is here! Last year at this time, we heard a lot about the West Nile virus.

West Nile virus is spread by the bite of an infected mosquito. The virus can infect humans, horses, many types of birds, and some other animals. Most people who become infected with West Nile virus will have either no symptoms or only mild ones. However, on rare occasions, West Nile virus infection can result in severe and sometimes fatal illnesses.

To help avoid mosquito bites, remind your staff to:

1. Apply insect repellent containing DEET (N,N-diethyl-meta-toluamide) to exposed skin whenever you are outdoors. Follow directions on the label for use and take special precautions for children. Do not apply to children's hands or around the mouth area. Do not use DEET on infants. Put cover on carriages or playpens
2. When possible, wear long-sleeves, long pants and socks when outdoors.
3. Consider avoiding outdoor activities from dusk to dawn, which are peak mosquito biting times.
4. Contrary to popular belief, electromagnetic and ultrasound devices and Vitamin B are not effective in preventing mosquito bites.
5. Limit the number of places around your facility for mosquitoes to breed by getting rid of various habitats (see below).

Mosquitoes lay their eggs in standing water. Eliminate such areas and prevent them from coming in the first place! Remind your groundskeeping staff to:

1. Repair failed septic systems.
2. Drill holes in the bottom of recycling containers that are left outdoors to allow water to drain.
3. Keep grass cut short and shrubbery trimmed.
4. Properly dispose of old tires, tin cans, plastic containers, ceramic pots or other unused containers that can hold water.
5. Clean clogged roof gutters, particularly if leaves tend to plug up the drains.
6. Aerate ornamental pools or stock them with predatory fish.
7. Turn over plastic wading pools when not in use.
8. Turn over wheelbarrows and don't allow water to stagnate in birdbaths.
9. Clean and drain swimming pools that are not being used.
10. Use landscaping to eliminate standing water that collects on your property.

What are the effects of West Nile Virus?

Mild cases of West Nile encephalitis may cause a slight fever, rash, swollen lymph nodes, conjunctivitis (irritation of the eye), or headache. Patients with mild symptoms are likely to recover completely and do not require any specific medication or laboratory testing.

More severe infections are marked by rapid onset of a high fever with head and body aches, stiff neck, muscle weakness, disorientation, tremors, convulsions and, in the most severe cases, coma or paralysis. In some individuals, West Nile Virus can cause permanent neurological damage or death.

For More Information

To learn about West Nile Virus cases in your area, visit the Indiana State Department of Health's Web site at: http://www.in.gov/isdh/healthinfo/westnile/.

For more information, contact the Marion County Health Department, Mosquito Control Division, at 317-221-7440.

RECYCLING BIN

America Recycles Day

By Kristin Brier

America Recycles Day is November 15. Start planning your celebration now!

It's happening again ... this November 15, people all over the United States will be celebrating their past recycling successes, looking for ways to increase their future recycling endeavors, and making special efforts to purchase recycled content products. America Recycles Day serves to remind us to buy products made from recycled materials. "Buying recycled" closes the recycling "loop" as recycled items (instead of virgin natural resources) are utilized to make new products and stronger markets for our recyclables are created.

Indiana students and teachers in grades K-6 have a special opportunity in 2003 to learn more about what products are made from recycled materials in your own school and how your school can do better at buying recycled. The America Recycles Day: Indiana planning committee is sponsoring a "Buy Recycled Scavenger Hunt" where students will search your school for products made from recycled materials. Grand prize winning classes, for each of K-2 and 3-6 grade level categories, earn:

- An educational assembly for the winning classes' entire grade presented by the America Recycles Day Indiana planning committee and
- A pizza party for the individual winning class.

To enter the scavenger hunt contest...

For more information on how to enter the contest, contact

Chad Trinkle
E-mail: ctrinkle@dem.state.in.us.

Educators have a lot of material to cover throughout the school year and need to plan ahead. Specific contest details will be announced in August, so be sure and look for them in your email inbox! Reserve a day on your calendar now to participate. Entries will be due by November 5, 2003. Once the ISTEP tests are over, take a fun breather and enter your class! You can also email Chad Trinkle at ctrinkle@dem.state.in.us for more information on how your school can participate in the America Recyles Day celebration.

To enter the adult art contest...

For more information on how to enter the contest, contact:

Kristin Brier
E-mail: kbrier@dem.state.in.us.

Adult artists are invited to enter the America Recycles Day: Indiana art competition. This juried art exhibition will feature works made from reused or recycled materials. Top entries will be displayed at Joe Reuzar's Deli in Fountain Square, Indianapolis. Sponsored by Capitol City Metals and Joe Reuzar's Deli, grand prizewinners will receive monetary prizes.

Since the first America Recycles Day celebration in 1998, more than 40,000 Hoosiers have pledged their commitment to recycling and buying recycled products at over 650 specially organized events around the state. You may check with your local Solid Waste Management District to see what celebratory events are being organized in your county. Many of these local government organizations have staff educators who can come to your school to make various presentations on solid waste, recycling, composting, and buying recycled. Visit http://www.state.in.us/idem/oppta/recycling/swmd/contact.pdf for a list of Indiana Solid Waste Management Districts or call 800-451-6027. Help spread this important message and become involved today!

DEAR LORI

Letters to the IDEM Commissioner

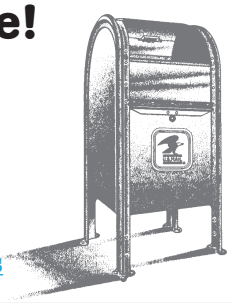
Lori F. Kaplan is the commissioner of the Indiana Department of Environmental Management. Do you have a question you would like to ask Lori? Submit your questions electronically to earthweek@dem.state.in.us and your question (with Lori's response) may appear in the next edition of the Notepad.

Dear Lori: Recently our teaching staff was sent a notice stating that our school building would be undergoing renovation this summer. The notice also stated that during this renovation, asbestos would be removed. What exactly is asbestos and is my classroom safe?

Drop Lori a Note!

Send all correspondance to:

Indiana Dept. of Environmental Mgmt.
Attn: Lori Kaplan
100 N Senate Ave.
P.O. Box 6015
Indianapolis, IN 46206-6015
Or E-mail: earthweek@dem.state.in.us



Lori: Asbestos is a naturally occurring fibrous mineral that was used extensively in commercial building products over the past century. Because of its strength, as well as heat and corrosion resistance, asbestos was and is used in such applications as plaster, drywall, adhesives, joint compounds, roofing shingles, floor tiles and all types of insulation. Its use peaked in the period from World War II through the 1960's. This era coincided with the "baby boom" and the explosion of new school construction. Most schools built during this time still contain asbestos in some form. If your building is of this vintage, it is likely that it contains asbestos.

Asbestos-related diseases are most often associated with the amount of exposure over a period of time. The longer one is exposed to asbestos, the greater the risk of developing some type of asbestos-related disease. People who may be most at risk are/were, those who mined and processed the raw asbestos ore, shipyard workers, insulators and asbestos-removal personnel. The most common diseases associated with asbestos exposure are mesolthelioma, lung cancer, and asbestosis. Mesothelioma is a cancer that can be directly linked to exposure to asbestos. Asbestosis is a scarring of the lungs that occurs with the accumulation of fibers in the lungs over a number of years.

Asbestos in school buildings is regulated by federal law, the Asbestos Hazard Emergency Response Act. Often known as AHERA, the law requires that all school buildings, both public and private, develop and implement management plans to actively manage asbestos-containing building material in place. Each school district must designate a person responsible for administering management plan requirements.

A key section to the AHERA regulation requires the schools to develop an operations and maintenance (O&M) program where friable (easily crumbled) asbestos is found. The O&M program requires specific work practices be followed in the event that this easily crumbled asbestos has the potential to become airborne. The work practices range from wiping walls with a wet cloth to removing the asbestos altogether. The United States Environmental Protection Agency recommends that asbestos that is in good condition and not in danger of crumbling not be removed. However, removal of material may be the most logical step when school buildings undergo extensive remodeling and renovation. If you have any concerns about asbestos removal in your school, make sure to address them with the designated person.

IDEM's Asbestos and Lead Section has a number of staff members devoted to asbestos issues. IDEM issues licenses to asbestos abatement personnel including: workers, supervisors, inspectors, management planners, and contractors. If you have any further questions regarding asbestos in schools or the AHERA regulation, contact IDEM's AHERA coordinator, Dan Stamatkin, at (317) 233-6513 or email dstamatk@dem.state.in.us.

SUPER SCHOOL

Ben Davis High School, Indianapolis

By Jacqueline Natz

You have heard it a million times: driving causes pollution. Exhaust from automobiles deteriorates our air quality and contributes to the depletion of the ozone layer. Even though we constantly hear about problems caused by exhaust and carbon monoxide, we sometimes neglect the fact that the tires that carry these automobiles also have the potential to create a variety of health, safety and environmental hazards if they are not disposed of properly. Tires that sit in landfills, on the side of roads, and even near our own yards can harbor West Nile Virus-carrying mosquitoes. Tires that are set on fire release toxic gases into the air.

This quarter's Super School, Ben Davis High School (BDHS), in Indianapolis' Wayne Township, is helping to put used tired to good use. BDHS, along with Beech Grove High School, Decatur Central High School, Lake Central High School, and Taylor University recently received a grant from IDEM to help fund the resurfacing of their schools' athletic fields. Such resurfacing will be completed using ground-up tires that are sprinkled throughout the grass fields. Ben Davis was given $30,000 in grant funds and has already rubberized their football field. They are now undergoing processes to do the same to their soccer field.

"There are so many benefits of using rubber for athletic fields and landscaping," said Steven Poe, IDEM's Waste Tire Coordinator. "It is actually safer for the athletes. Grass can still continue to grow because the field does not get torn up as regular grass fields often do. The rubber does not compact when you walk across it over and over again the way dirt does. It also does not mildew or attract pests the way dirt and mulch often does."

Using scrap tire rubber for athletic field renovations is only one environmentally friendly change BDHS officials have chosen to make. For the past three years, BDHS has been undergoing a number of renovations to its school facilities. In order to safeguard an old grove of trees, BDHS relocated 40 trees to another part of campus instead of cutting them down. "In addition to the 40 trees that were saved, 300 more were planted across campus as part of the Ben Davis renovation," said Tom Landoc, a Wayne Township schools spokeman.

Hundreds of schools across the nation are also using scrap tire rubber in their renovation projects, and are doing so for many reasons in addition to the environmental benefits. "Schools are finding that rubber makes a good surface for wheel chair paths and play ground filling," according to Poe. Now, companies are even manufacturing tire rubber in colors that will make fields and playgrounds look much more bright and modern. "You can even get tire mulch for your own yard. It looks like real mulch! I'm going to use it in my yard; it does amazing things for root systems."

For More Information

To learn more about Indiana's Waste Tire Grant Program, contact

C. Steven Poe
Phone: 317-233-9341
Email: cspoe@dem.state.in.us

MONEY MATTERS

Environmentally Preferred Purchasing

By Janet Fox, Director of the State Greening the Government Program

Everything we do seems to impact something else. Have you ever thought about how your purchasing habits might affect the environment?

The intentional purchase of products and packaging that have a less negative impact on the environment than other similar products is a practice known as Environmentally Preferable Purchasing, or EPP. Although various environmental criteria can be used to evaluate products, two of the most frequently used criteria include products that are made with recycled-content or products that are energy efficient.

One example of a recycled-content product is copy and printer paper made from previously recycled fiber. Purchasing recycled-content paper reduces the need for virgin tree pulp and also provides a market demand for the materials collected in recycling programs.

Many energy efficient products are now available, such as Energy Starâ copiers, computers, televisions, refrigerators and other devices.

A few other EPP criteria include:

- Reuse options for the product (i.e. office furniture, electronics and computers);
- Product toxicity (i.e. for cleaners, pesticides or wood preservatives);
- The kind of chemicals given off by the product during its intended use (i.e. vapors produced by adhesives in pressed wood or flooring products which may pose problems for sensitive individuals);
- Transportation requirements (how far the item is shipped to get to you); or
- Products made from rare or endangered materials (i.e. items made from old-growth forest timber).

Many buyers specify and purchase recycled-content products. The trend in purchasing departments that practice EPP is moving towards considering and weighing multiple environmental criteria with the goal of purchasing the products with the overall least negative environmental impact.

In order to get the best product to meet your needs, the environmental criteria are considered IN ADDITION TO the products' quality, availability, performance and price!

The State of Indiana, through the Department of Administration, has been purchasing recycled-content products since the early 1990's. The State also purchases various re-manufactured, energy-efficient or non-toxic products. The good news is that it is easy for local political subdivisions (like local government units and public schools) to also buy many of these same products, using the same quantity pricing that the state has already negotiated!

The Indiana Department of Administration's Procurement Division develops Quantity Purchase Agreements (QPAs) for a range of products that are widely used by state government facilities. For example, QPA's are in place for copy paper, printer cartridges, cleaning products, promotional items, re-refined motor oil, paints and much more! For a complete listing, check the Procurement Division's Internet site at http://www.in.gov/idoa/proc/, and click on the hyperlink called "Quantity Purchase Agreements."

The list of all QPAs will appear. All of the QPAs and their pricing are electronically available on this site so products and prices can be reviewed. Each QPA entry contains a field marked "Pol-Sub". If there is a check mark in the field, that contract is available to local political subdivisions, which include schools, . If you want to purchase any of the listed items, you would use your own internal process to make the purchase, but you would pay the listed QPA price - which can often be much lower than retail costs.

So, if you'd want to begin or expand your purchase of recycled-content copy paper or remanufactured toner cartridges, re-refined motor oil for your fleet vehicles, promotional items for school projects, energy-efficient electronics for your facilities, or paints and sealers to maintain your wood playground equipment, you now have an EPP choice!

For further assistance or questions, contact Linda Sharp mlsharp@idoa.state.in.us or 317-233-3901.

For Assistance:
For further assistance or questions, contact

Linda Sharp
E-mail:
mlsharp@idoa.state.in.us
Phone: 317-233-3901.

HEALTH CORNER

National Walk to School Day

By Jacqueline Natz

Calling all…people! Well, at least everyone who is concerned with their environment, community, child's safety, physical fitness, or even the commute to and from school and work. A national event entitled "Walk-to-School Day" (WTSD) can be a fantastic way for schools, parents, and community members to not only help the environment, but also to improve participant's physical fitness, community togetherness, and even traffic congestion!

On October 8th, 2003, thousands of children across America will walk past the family car out into the fresh air and reap the benefits of walking to school. Does it seem too easy? That's because it is! Your students will learn how to help the environment without taking time out of your busy curriculum. By deciding to participate in WTSD, your students will have the opportunity to reduce air pollution and make important health-related decisions at the same time. Further, WTSD can be a great way to teach young children about the importance of traffic safety. You can find new and safer routes to school that you feel comfortable with them taking everyday.

Why Participate in Walk to School Day?

"Walk-to-School Day" (WTSD) can be a fantastic way for schools, parents, and community members to not only help the environment, but also to improve participant's physical fitness, community togetherness, and even traffic congestion!

Scientists and health officials stress the importance of at least 30 minutes of physical activity a day. Yet 78% of children do not meet this recommendation today. By spreading the word and supporting a WTSD day at your local school, you can help to improve your students' health as well as the adults who participate with them!

"Adults?", you ask? Yes, of course adults! The participation of parents, teachers, school staff, and other community members is vital to set a good example for our young people. It is imperative to teach them that one's well being can directly affect the tone of the community. Your participation and interaction will further help to strengthen your relationships to them. By taking the time to walk with your child or student, you are opening yourself up to the possibility to learn more about him or her than you would during weeks of driving!

Talk to your principle to let them know that you would like to support WTSD and organize an event for your school. Art departments can create flyers to help raise awareness of the event. For help planning your walk or to officially register your school's participation, check out resources for organizing the event, and see what other Indiana schools have signed up so far, you can visit the WTSD web site at http://www.walktoschool.org. For information on IDEM's involvement in WTSD, contact Paula Smith at 317-233-1210 or psmith@dem.state.in.us.

DISPOSAL DILEMMA

Non-point Source Pollution

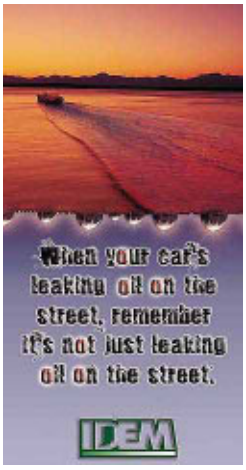
By Karen Terrell, and Cheri Storms

Federal and state laws have enabled us to dramatically reduce water pollution caused by large industries that dump hazardous wastes directly into our waterways. Another problem, however, concerns the average citizen who inadvertently pollutes our waterways. As you well know, when driving, working on, and washing our automobiles, taking our pets for walks, and fertilizing our lawns, Hoosiers unintentionally contribute to water pollution every day via "nonpoint source pollution" run off.

IDEM is reaching out statewide to teach Hoosiers how their every-day activity can potentially harm their water supply. IDEM Commissioner Lori F. Kaplan notes that nonpoint source pollution is a problem that can be easily overcome. "Nonpoint water pollution occurs away from waterways, so many people do not make the connection that they are contributing to water pollution," Kaplan said. "Our outreach program helps make that connection clear, and I encourage Indiana citizens, schools and businesses to contact IDEM so they can help get this important message out."

To that end, IDEM produced a series of four topical posters including:

1. Fluids that either drip from automobiles or are released on the ground or into storm drains;
2. Decayed pet wastes that seeps into the ground water when owners do not clean up after their pets;
3. Detergent run-off into storm drains and ditches when automobiles are washed in the driveway; and
4. Fertilizer run-off into storm drains and ditches that occurs when homeowners and groundskeepers over-fertilize or improperly apply chemicals to their lawns.



IDEM's goal is to show people how they can make simple changes in their lives that will, when made by a collective group, result in dramatic improvements to Indiana's waterways. According to Pam O'Rourke, a senior environmental manager for IDEM, "It only takes one gallon of used motor oil to pollute a million gallons of fresh water - an entire year's supply of drinking water for 50 people." Schools are the perfect place to educate students and staff on these issues. From the automotive shop classes to the maintenance garages and groundskeepers, everyone can benefit from this information. Additionally, students will learn about the effects of nonpoint source pollution and hopefully endeavor to make responsible choice in their adult years.

Remember, every drop of oil, pet waste, detergent, or fertilizer that hits the ground can contaminate our waterways. To receive your FREE copies of these materials for use in your respective schools, please contact Char Roller at 800-451-6027, press 0 and ask for extension 3-0701. Thank you for all that you do to educate your students and staff on ways they can protect Indiana's environment. Together, we can make a difference in the quality of our water!

Continued on next page...

DISPOSAL DILEMMA *(CONTINUED)*

PREVENTING "POINT SOURCE" WATER POLLUTION AT SCHOOL VEHICLE MAINTENANCE SHOPS

In addition to nonpoint sources, point sources, such as school vehicle maintenance shops, can also contribute to water pollution. There are, however, a number of ways to properly manage wastes at their source to prevent water pollution. The following steps can help ensure fluids do not contaminate Indiana's waters:

1) Collect leaking fluids from vehicles, including vehicles that are awaiting repairs, keeping different types of fluids separated for proper management and recycling.
2) Drain and replace fluids in a designated area, away from drains and away from connections to storm and/or municipal sewer systems.
3) Store fluids properly:

   When wastes or recyclables will be shipped and are subject to the Department of Transportation (DOT) regulations, store them in containers that meet DOT requirements. This will allow you to ship the materials directly, without having to transfer materials to a new container, potentially spilling them in the process.

   Store fluids away from drains, or place barriers, such as a concrete wall or absorbent socks around fluid containers to prevent leaks from reaching the drains.
4) Store batteries in polyethylene trays or on acid-resistant coated concrete.
5) Place storage containers in proper locations:
   Store fluids on paved surfaces (rather than directly on the ground), and never allow the containers to reside in standing water. Inspect containers weekly, looking for signs or corrosion and/or leaks. If containers must be stored on the ground, place them on a wooden pallet and remember to inspect the containers weekly for signs of corrosion and/or leaks.
6) Post signs or otherwise mark drains, sinks and other connections, warning students not to pour wastes, such as oil, solvents or antifreeze down the drain.

For more information on how to properly manage wastes generated at vehicle maintenance shops, visit IDEM's website at: http://www.in.gov/idem/ctap/vehicle/index.html

ABOUT THE NOTEPAD

The Notepad is an IDEM quarterly electronic publication designed to inform Indiana educators and school administrators about possible environmental health threats in their buildings and to keep them abreast of environmental education resources.

This is a free publication intended to provide general information. Please contact an appropriate IDEM representative for assistance.

Articles may be reprinted. Please provide the Notepad appropriate credit and a copy of the reproduced text.

Comments, letters to the editor, and any inquiries or questions for "Dear Lori" should be e-mailed to earthweek@dem.state.in.us.

IDEM Staff

- **Program Manager**
  Paula Smith
  psmith@dem.state.in.us
- **Project Director**
  Chad Trinkle
  ctrinkle@dem.state.in.us
- **Editors**
  Matthew Deaner
  Paula Smith
  Chad Trinkle
  Cheryl Reed
- **Art/Design/Web Developer**
  Matthew Deaner
  mdeaner@dem.state.in.us

Indiana Department of Environmental Management
100 N Senate Ave.
P.O. Box 6015
Indianapolis, IN 46206-6015
Tel: (800)-451-6027
Fax: (317)-233-6647
http://www.in.gov/idem/schoolnews